

**What is claimed is:**

1. A multi-component gas analyzing method using FTIR, comprising:  
quantitatively analyzing a plurality of components in a sample based upon an absorption spectrum obtained by FTIR;  
calculating multi-component concentrations from a mixed gas spectrum by using a quantitative algorithm; and  
after calculating the multi-component concentrations, correcting for a change in spectrum due to a coexistent gas component.
2. The method of claim 1, further comprising:  
measuring the coexistent gas component using FTIR; and  
directly applying resulting data from the correcting calculations.
3. The method of claim 1, further comprising:  
measuring the coexistent gas component using a method other than FTIR; and  
using an external analyzer to read resulting data from the correcting calculations, wherein time matching is performed by a CPU of the FTIR.
4. The method of claim 1, wherein the correcting step corrects influences due to a difference in a base gas composition between an exhaust gas and a calibration gas.
5. The method of claim 1, wherein the correcting step corrects influences of coexistent H<sub>2</sub>O with respect to CO, CO<sub>2</sub>, NO, and N<sub>2</sub>O.
6. The method of claim 5, wherein the influence is approximated by a linear equation for a fixed H<sub>2</sub>O concentration.
7. The method of claim 5, wherein the influence is approximated by a quadratic equation for a fixed H<sub>2</sub>O concentration.
8. The method of claim 1, wherein the correcting step corrects influences of coexistent H<sub>2</sub>O with respect to CO.

9. The method of claim 8, wherein the influence is approximated by a linear equation for a fixed H<sub>2</sub>O concentration.

10. The method of claim 8, wherein the influence is approximated by a quadratic equation for a fixed H<sub>2</sub>O concentration.

11. The method of claim 1, wherein the correcting step corrects influences of coexistent H<sub>2</sub>O with respect to CO<sub>2</sub>.

12. The method of claim 11, wherein the influence is approximated by a linear equation for a fixed H<sub>2</sub>O concentration.

13. The method of claim 11, wherein the influence is approximated by a quadratic equation for a fixed H<sub>2</sub>O concentration.

14. The method of claim 1, wherein the correcting step corrects influences of coexistent H<sub>2</sub>O with respect to NO.

15. The method of claim 14, wherein the influence is approximated by a linear equation for a fixed H<sub>2</sub>O concentration.

16. The method of claim 14, wherein the influence is approximated by a quadratic equation for a fixed H<sub>2</sub>O concentration.

17. The method of claim 1, wherein the correcting step corrects influences of coexistent H<sub>2</sub>O with respect to N<sub>2</sub>O.

18. The method of claim 17, wherein the influence is approximated by a linear equation for a fixed H<sub>2</sub>O concentration.

19. The method of claim 17, wherein the influence is approximated by a quadratic equation for a fixed H<sub>2</sub>O concentration.

20. The method of claim 1, wherein the correcting step corrects influence caused by a difference in water concentration between exhaust gases and a calibration gas and a change in H<sub>2</sub>O concentration in a sample gas being measured.